

## **REMARKS**

### **35 USC § 112**

Claims 36, 37 and 38 were rejected under 35 USC §112 first paragraph. Claims 37 and 38 have been cancelled without prejudice or disclaimer to any patentable subject matter therein solely to expedite prosecution of this application. Claim 36 has been amended to overcome the 35 USC § 112 rejection.

### **35 USC § 103**

Claims 1-5, 8, 10-14, 21 and 25-49 were rejected under 35 USC §103(a) as being obvious over Schnute, U.S. Patent No. 6,239,142 either alone or with King, *Medicinal Chemistry: Principles and Practice*, 1994, pp 206-208. This rejection is respectfully transversed with respect to claims 1-5, 8, 10-14, 21 and 25-48.

Claim 49 has been cancelled without prejudice or disclaimer to any patentable subject matter and solely to expedite prosecution of this application.

The Examiner states that Schnute generically discloses an anti-herpesviral 4-oxo-4, 7-dihydrothienopyridine carboxamide compound. Applicants contend that the generic compound described by Schnute at column 1, line 50, to column 3, line 57, does not describe the compounds claimed in claim 1 of the present application. In particular, the claimed compounds differ from the generic compounds of Schnute at the R<sup>4</sup> substituent of the application compared to the R<sup>3</sup> substituent of Schnute.

The generic structures and disclosures of Schnute do not suggest that the R<sup>4</sup> substituents described and claimed in the present invention were contemplated by Schnute. Schnute has no generic teaching to suggest the substitution pattern of R<sup>3</sup> that would render the claims of the present application obvious.

Additionally, the compounds of the claimed invention are more potent than the compounds disclosed by Schnute. The table at column 28, lines 10-65, of Schnute, shows the potency of Schnute's compounds. The table on page 29 of the specification shows the potency of the compounds of the application. It is apparent that the compounds of the application are more potent than the compounds of Schnute.

When Schnute's compounds, Examples 39 and 40 are considered, there is no teaching in Schnute to substitute a "six membered heteroaryl bonded via a carbon atom" for phenyl or 3-hydroxy phenyl.

In addition, the Examiner suggests that it would be obvious to substitute pyridyl for phenyl. When the data of table 1 is examined, substituting pyridyl for phenyl or 3-hydroxyphenyl gives unexpectedly better activity. In Schnute examples 39 and 40, have an  $IC_{50}$  of .31 micromolar. In contrast, examples 1-5 and 8 have activity ranges with an  $IC_{50}$  of .06 to .20 micromolar, having 2 to 5 times greater potency.

Applicants contend that their results show the unexpected benefit of using heteroaryl for  $R^4$  in the claims.

### **Double Patenting**


Claims 1-5, 8, 10-14, 21, 25-43 and 49 were rejected under the judicial created doctrine of obviousness-type double patenting over claims 1-21 and 23-32 of U.S. Patent No. 6,239,142 , "the '142 patent" (Schnute). This rejection is respectfully transversed. The independent claims of the 142 patent are 1 and 2, the remaining claims are dependent upon either 1 or 2 or both. The claims of the instant application differ from claim 1 of the '142 patent by having a different substituents at the  $R^2$  and  $R^3$  positions of th3 '142 patent compared to the  $R^2$  and  $R^3$  substituents of the '142 patent. Claim 2 of the '142 patent is different in that the  $R^3$  substituent cannot form the claimed heteroaryl substituted hydroxyl amine moiety that is claimed in the current application. Applicants contend that the claims of the present application are patentably distinct and non-obvious over the claims of the '142 patent for the reasons given above. Therefore, applicant respectfully requests that the double patenting rejection be withdrawn.

Claims 1-43 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over copending Application No. 10/649,209. Applicants respectfully traverse this provisional rejection. Application No. 10/649,209 (the '209 application) claims compounds with  $R^4$  being phenyl optionally fused to a benzene ring, and substituted with one or more  $R^6$ . In contrast the present application claims heteroaryl for  $R^4$  and there is no teaching in the present application to substitute a phenyl ring at  $R^4$ .

Applicants' undersigned attorney may be reached by telephone at (858) 622-8060. All correspondence should continue to be directed to our address given below. The Commissioner is hereby authorized to charge all fees due, or credit any overpayment, to Deposit Account Number 500329. If any fee not submitted herewith is required for the filing or consideration of this amendment, including a fee for any necessary extension of time, please charge all such required fees to Deposit Account No. 500329.

Respectfully submitted,

Date: August 12, 2004

  
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Marked up copy of the amended claims to show changes

36. (Amended) A method of treating atherosclerosis and restenosis, mediated by herpesviral infection, comprising administering to a mammal in need thereof a therapeutic amount of a compound of claims 1 or 2.